

Comparative Workforce Indicators for the State of Missouri

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Prepared by



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About the Report

This document is one product in a suite of four provided to the State of Missouri as part of the “State of the Workforce” project. The four documents are:

Missouri’s State of the Workforce Report 2003 that provides a full narrative analysis of the major challenges facing the State of Missouri if it desires a workforce that can compete with the regional, national, and global economies of the 21st Century.

Executive Summary of Missouri’s State of the Workforce Report 2003 that provides a shorter, more reader-friendly version of the key elements outlined in the full report. This Executive Summary is provided both within the larger report and as a stand-alone document.

Developing a Balanced Scorecard for Missouri’s Workforce System provides recommendations for measuring the performance at the operational and community impact level, rather than by specific program measures.

Comparative Workforce Indicators for the State of Missouri provides a detailed data snapshot of how Missouri compares to neighboring states Illinois, Iowa, and Kansas, as well as the United States overall. This snapshot provides an aggregate score as well as 10 macro indicator scores. Over 40 micro indicators support the 10 macro indicator scores. The detail follows.

About the Comparative Workforce Indicators®

The Corporation for a Skilled Workforce developed a series of comparative workforce indicators for several reasons. First, as a more concise, consistent, and understandable framework from which to compare any two distinct geographic areas, regardless of size (i.e. state, county, city, workforce area, etc.) The indicators were developed through a series of meetings with 15 innovative workforce directors from across the nation, including large metro areas such as Philadelphia, Chicago, Seattle, and Boston, as well as smaller, rural and multi-county areas.

The Comparative Workforce Indicators consist of 10 macro indicators supported by over 40 micro measures. For example, the macro indicator “Industries” is supported by seven micro measures including industrial diversity, rate of job growth, total industry sales, etc.

In the case of the Indicators, the word comparative is absolutely critical. The scores are set only by the comparative areas, in this case Missouri, Illinois, Iowa, Kansas, and the U.S. While CSW plans to release the indicators for all 50 states in 2004, the sample is not currently big enough to do more complex methodologies. However, we are able to compare the four states and nation against one another to set the score based on the high and low data values. Therefore, the best area (state or U.S.) is assigned the quartile ranking of High. The worst area is assigned the quartile ranking of Low. In between are Above Average and Below Average quartiles.

In the case of quartile narrative values, High reflects the best score, regardless of whether this should be a large or small number, positive or negative. For example, for the micro measure of annual income, a score of High would be assigned to the quartile that included the highest income among the five areas studied. However, a score of High would also be assigned to the state with the lowest percent of families in poverty since the lower value is the more desired outcome in this measure.

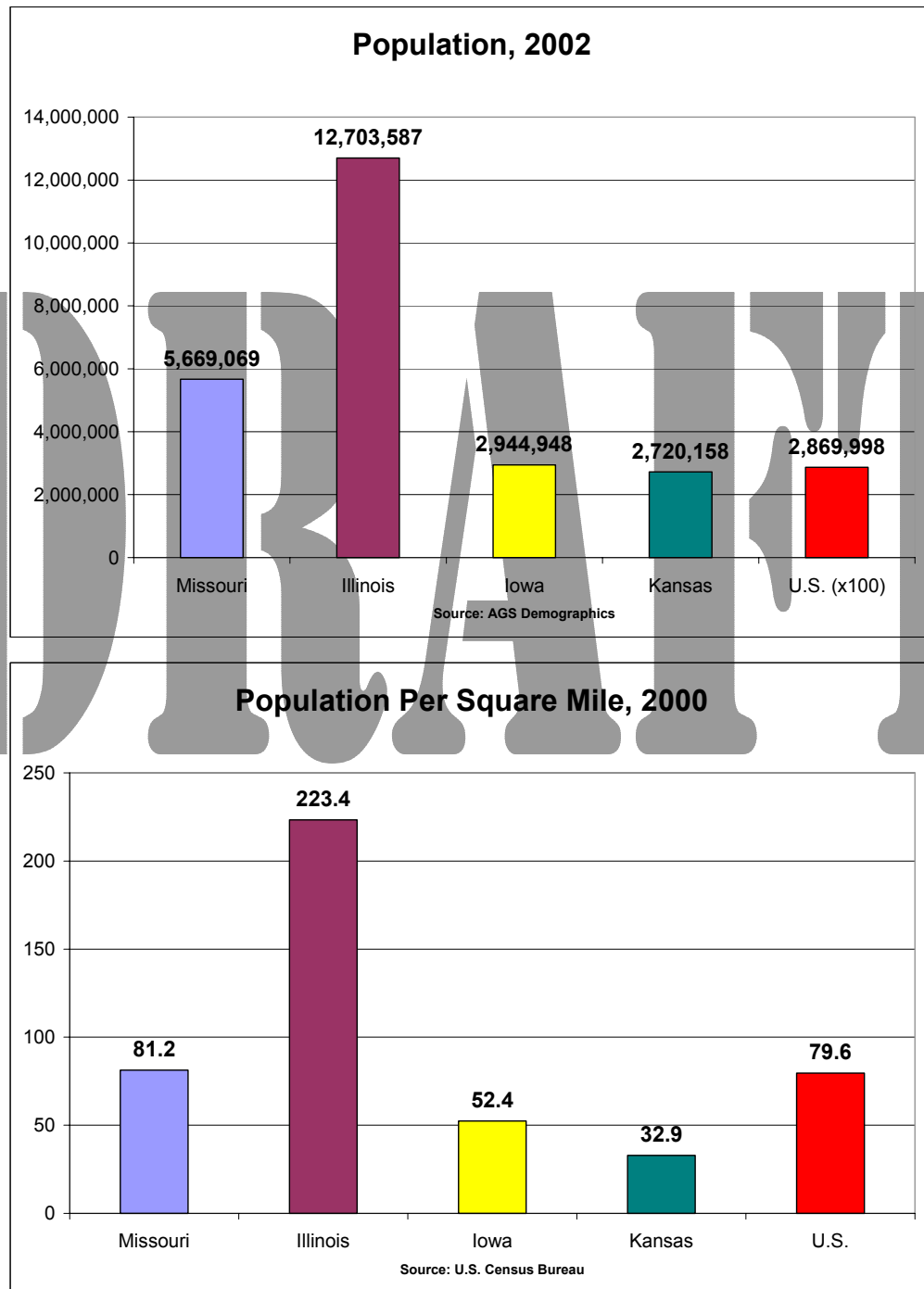
Ultimately, the Comparative Workforce Indicators seek to answer the question, “in what areas does Missouri have a comparative workforce advantage?” It does so through a consistent, streamlined fashion using available data that allows for greater comparability between areas.

This document is intended to present the Indicators “as is” with little narrative explanation. We believe the data tells the story itself by:

- First comparing Missouri to neighboring states and the nation at the aggregate level.
- Looking at the macro level of how Missouri fares across the 10 macro indicators relative to the nation.
- Looking first at how Missouri compares to neighboring states and the nation in the macro indicator, followed by the detailed micro indicators. This format follows, macro indicator by macro indicator, throughout the document.

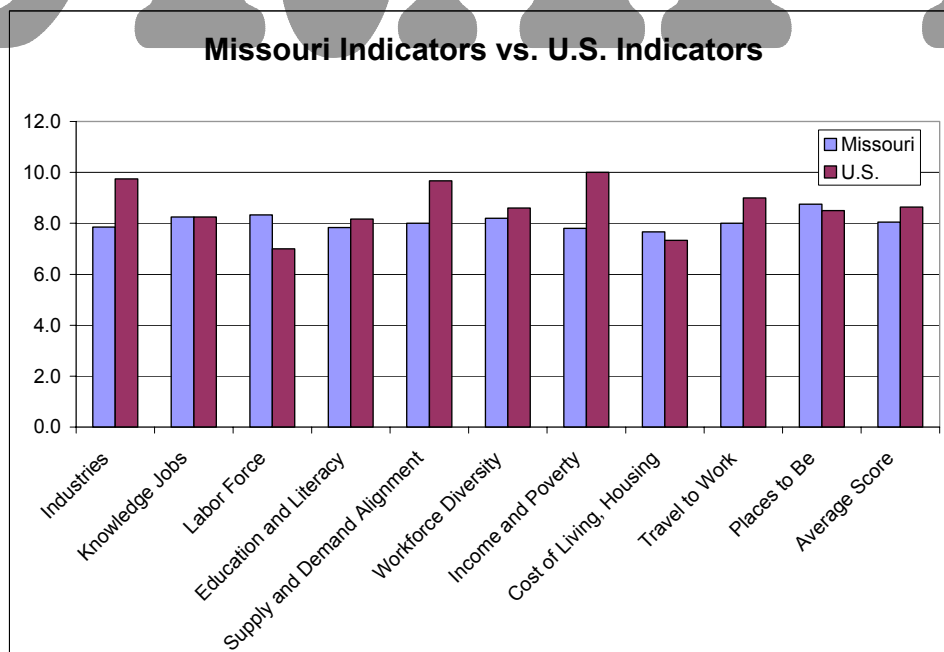
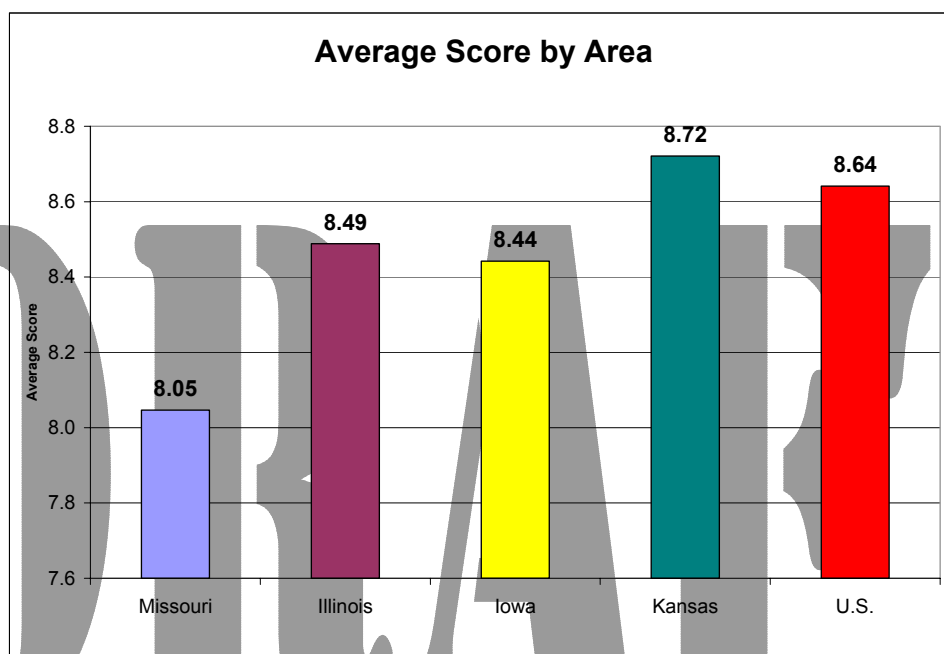
Setting the Context: Total Population and Density

CSW offered to compare Missouri to the nation and three states of its choosing. Through the Missouri Employment and Training Council, the competitive neighboring states of Illinois, Iowa, and Kansas were selected.



Overall Scores

The two graphics below show how Missouri compares to the other areas at the aggregate, “one final score” level. The second graphic shows how Missouri compares to the U.S. for the 10 macro indicators. In this regard, Missouri trails in many areas, but has a better score for Labor Force; Cost of Living, Housing; and Places to Be.



The Indicators

Macro indicators are in bold. These 10 macro indicators are the basis for the overall chart comparing Missouri to the U.S. on page 10. Micro indicators are those that are listed in bullets.

Industries

- Industrial Diversity
- Growth in Business Establishments, 1997-2002
- Rate of Job Growth, 1992-2002
- Total Job Growth, 1992-2002
- Rate of Job Growth, 2000-2002
- Total 2001 Sales, All Industries
- Average 2001 Sales per Business

Knowledge Jobs

- Percentage of Managerial, Professional, and Technical Jobs
- Average Skill Level, Top 25 Occupations
- Innovation: Average Patents per 10,000 Employees, 1995-1999
- Change in Occupational Wages, 1997-2001

Unemployment and Labor Force

- Change in Unemployment Rate, 1992-2002
- Current Unemployment Rate, July 2003
- Labor Force Attachment

Education and Literacy

- Educational Attainment, Bachelors Degree and Higher
- Educational Attainment, Associates Degree and Higher
- Level 1 Adult Literacy Rates
- Level 1 and 2 Adult Literacy Rates
- Percentage Not Speaking English Well as a Second Language
- At-Risk Youth

Supply and Demand Alignment

- Growth Alignment
- Occupational Alignment
- Educational Alignment

Workforce Demographics and Diversity

- Balance Between Entering and Exiting Workforce
- Change in Age by Years, 1990-2000
- Racial and Ethnic Diversity
- The Glass Ceiling
- Percentage of Disabled that are Employed

Income and Poverty

- Median Household Income
- Median Value of Owned Homes
- Percent of Families in Poverty
- Percent of Families with Single Female Parent
- Average Annual Public Assistance Income per Household

Cost of Living, Housing

- Monthly Housing Costs as Percent of Monthly Income
- Home Value to Annual Income
- Vacant Housing Rate

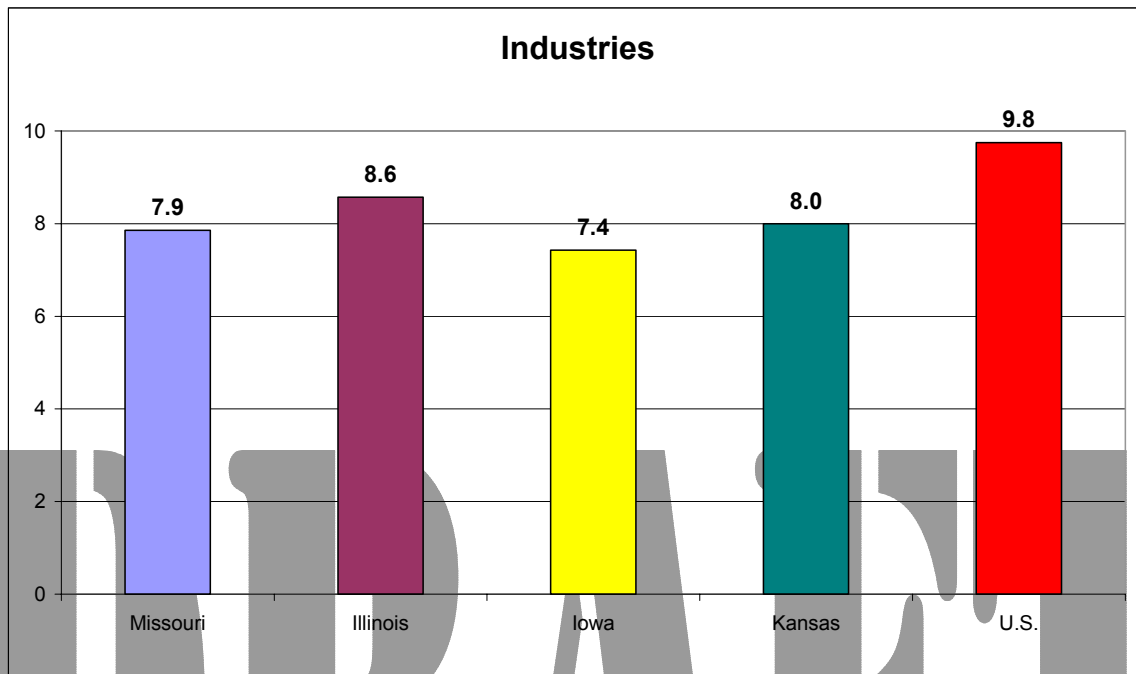
Travel to Work

- Mean Travel Time to Work in Minutes
- Solo Drivers per Square Mile
- Percent Using Public Transportation or Carpooling to Work

Perceived Quality of Life

- Population Growth, 1990-2000
- Household Internet Access
- Mobility: Percent of Population Living in a Different State in 1995
- Average Home Appreciation, 1995-2000

Indicator: Industries



About the Measures

Industrial Diversity measures the extent to which an area is insulated from a sharp downturn in one of its top industries. The measure looks at 17 different industrial sectors, separates the top three based on total employment, and then calculates the total employment distribution of the remaining sectors. **Growth in Business Establishments, 1997-2000** measures the rate of increase in total business establishments between 1997 and 2002.

Rate of Job Growth by MSA, 1992-2002 measures the rate of increase in employment between 1992 and 2002.

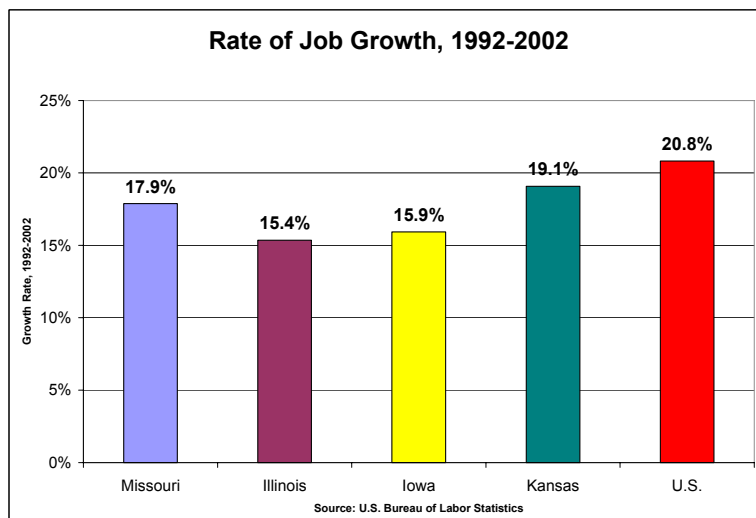
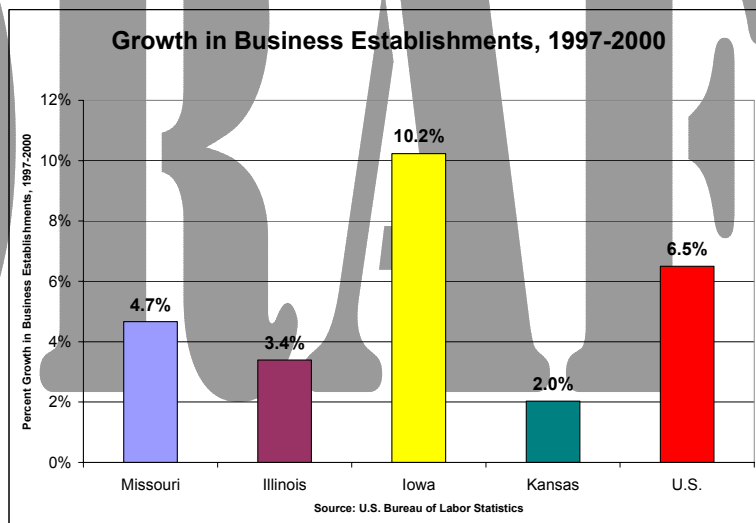
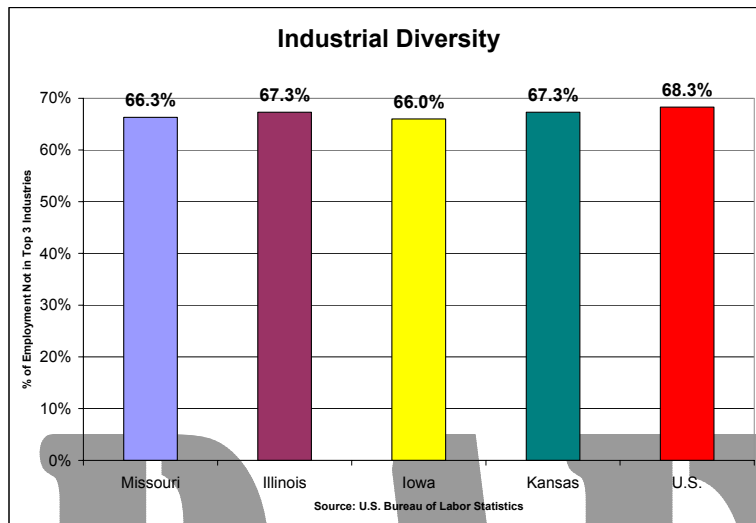
Total Job Growth by MSA, 1992 – 2002 measures the total increase in employment between 1992 and 2002.

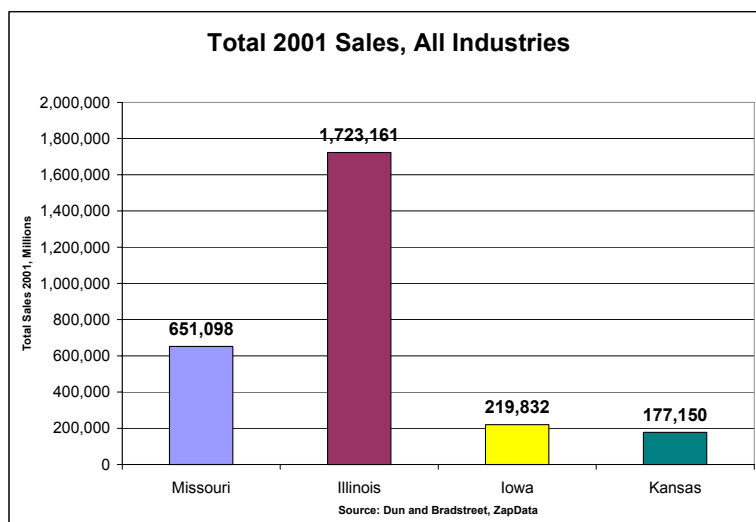
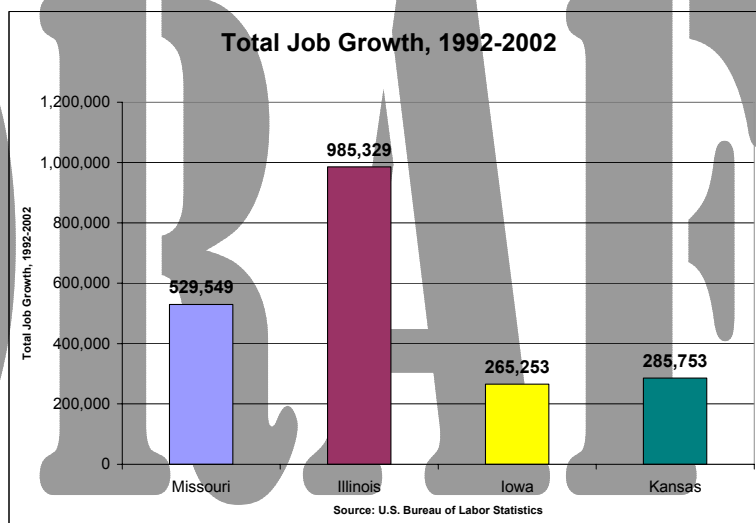
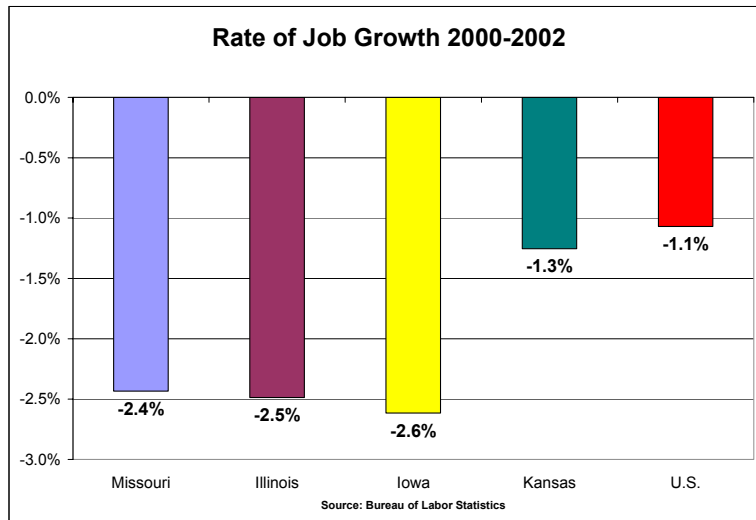
Rate of Job Growth by MSA, 2000-2002 measures the rate of increase in employment between 2000 and 2002. This portrays short-term growth as opposed to the rate of job growth between 1992 and 2002 that portrays longer-term trends.

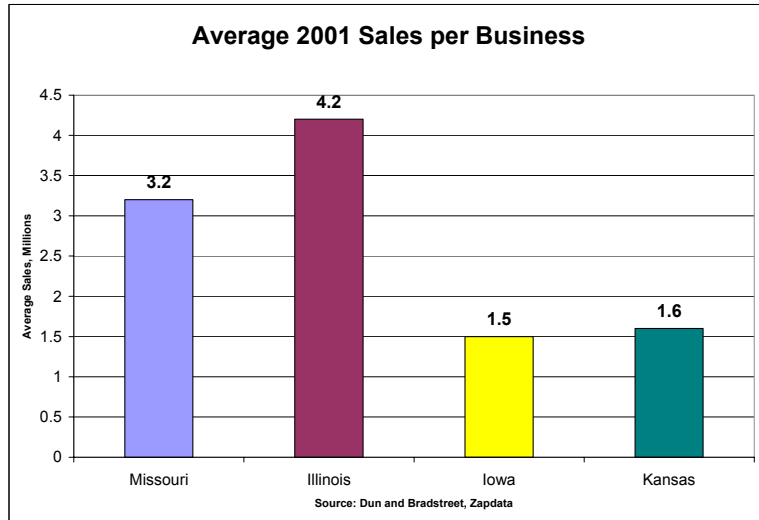
Total 2001 Sales, All Industries is a measure of the monetary value of total goods sold for all industries in the year 2001. The measure is one of the few that looks at “totals” rather than percentages in order to provide a sense of total economic contribution of an area.

Average 2001 Sales per Business takes total sales and divides it by number of business establishments in order to offset the size bias of the previous measure

Industries – Measures

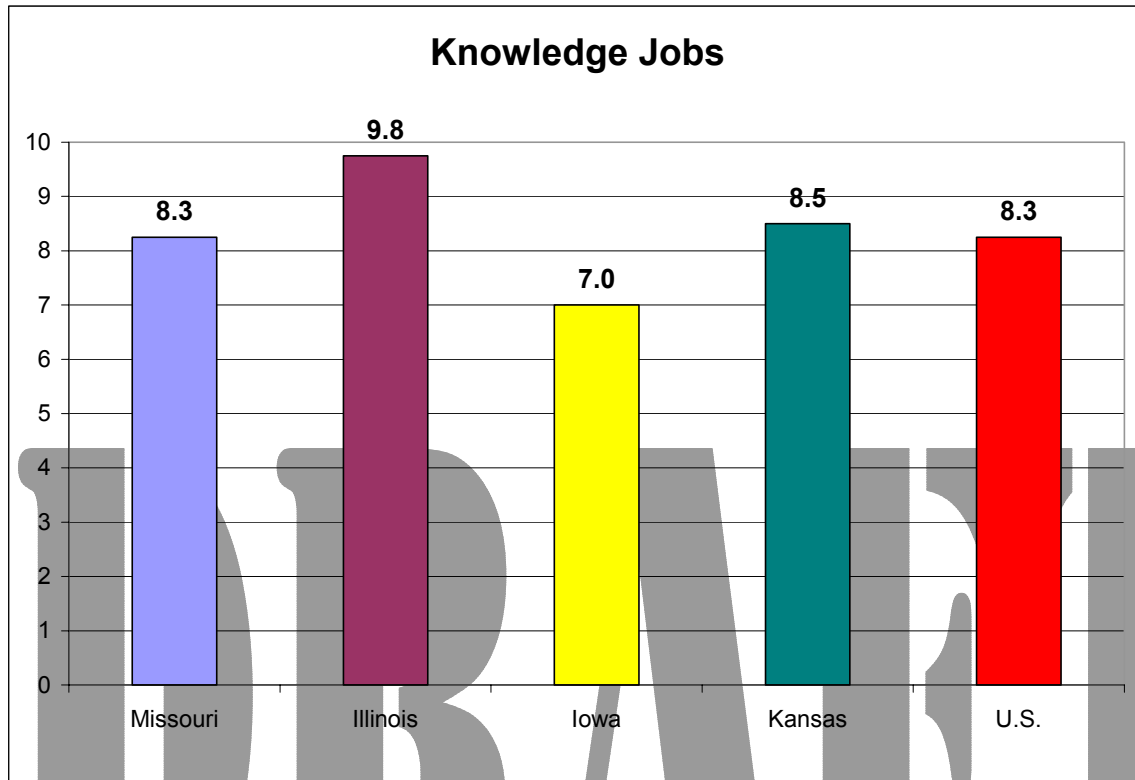






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Indicator: Knowledge Jobs



About the Measures

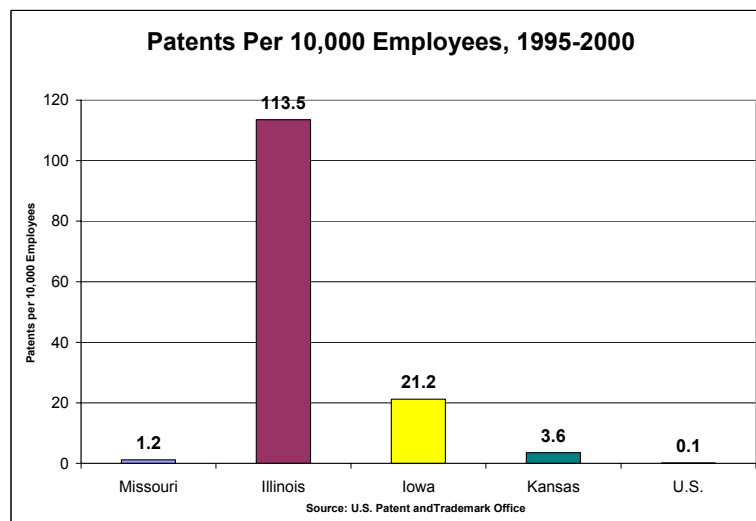
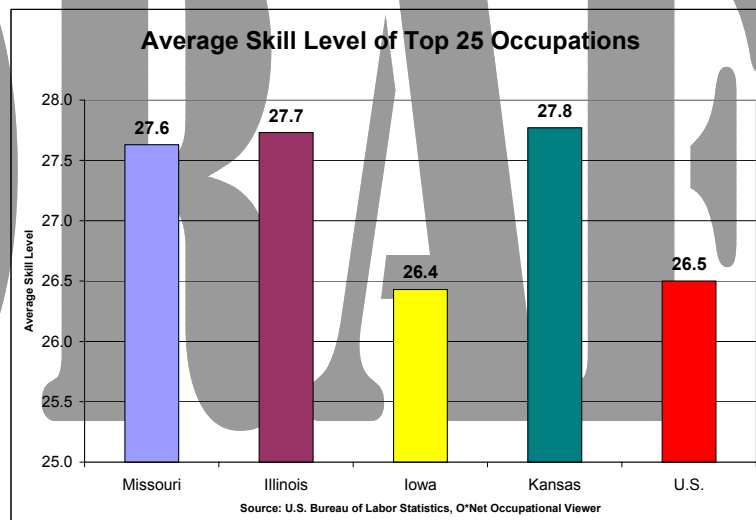
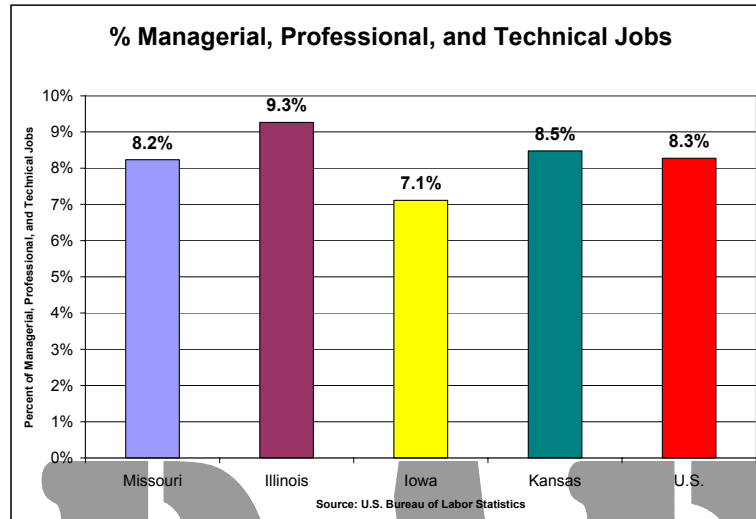
Percent of Managerial, Professional, and Technical Jobs (2001) identifies the percentage of all occupations that are classified as managerial, professional, and technical jobs – essentially “high-skill, white-collar jobs.”

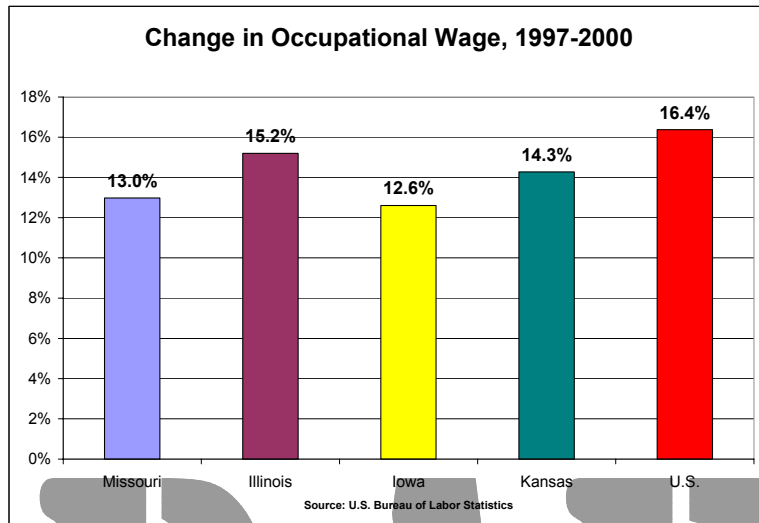
Average Skill Level of Top 25 Occupations uses the U.S. Department of Labor’s occupational database (O*NET) to identify the average skill level of an area’s top dozen jobs (2001) by total wages earned (total employment by occupation multiplied by the occupation’s annual wage).

Innovation: Patents per 100 Employees, 1995–1999 compares the average number of patents awarded by state to the average number of employees by state for the same period of time.

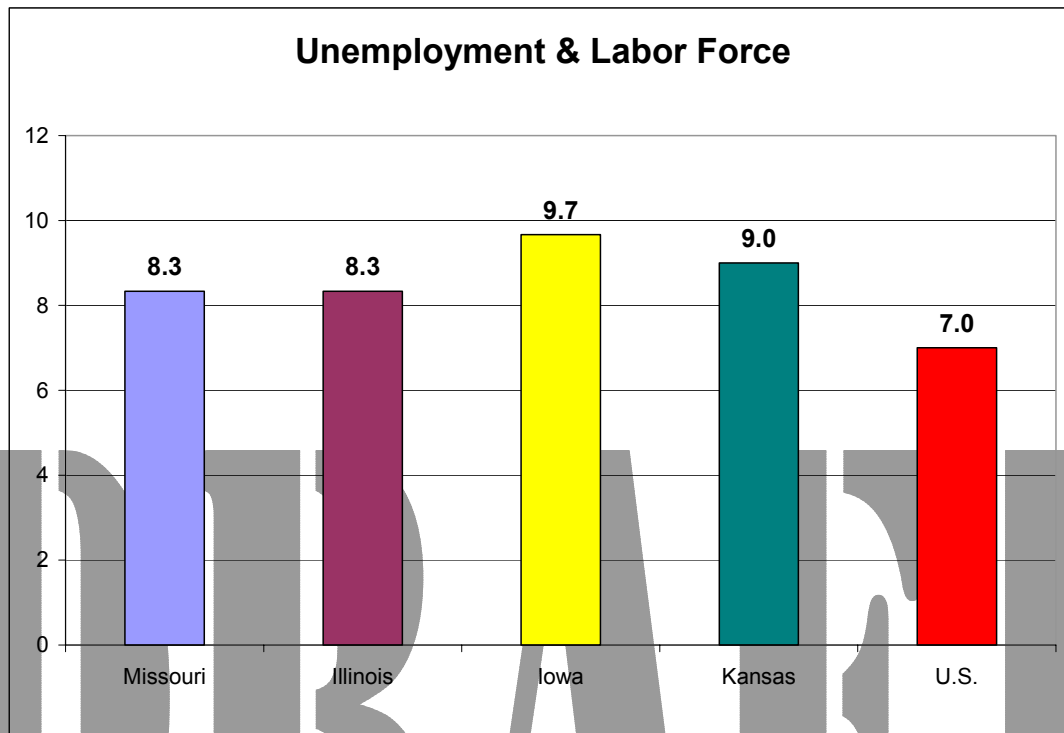
Change in Occupational Wages, 1997–2001 reviews the recent change in occupational wages, considering that data prior to 1997 is not comparable and also that this measure does not consider cost of living (COL is considered under a separate indicator).

Knowledge Jobs – Measures





Indicator: Unemployment and Labor Force

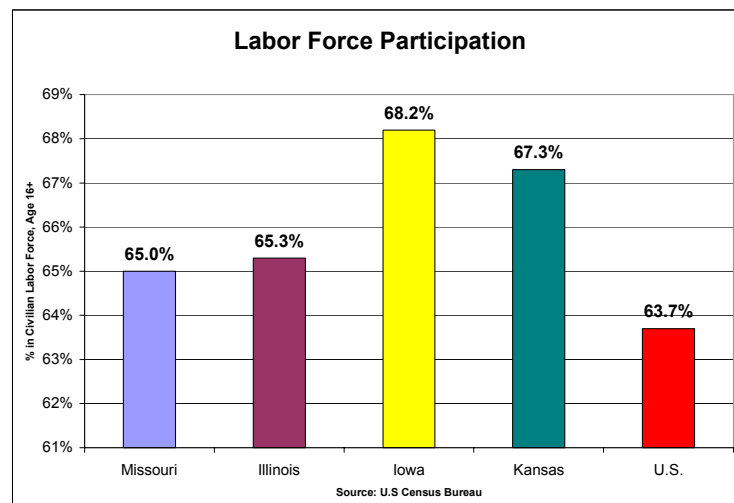


About the Measures

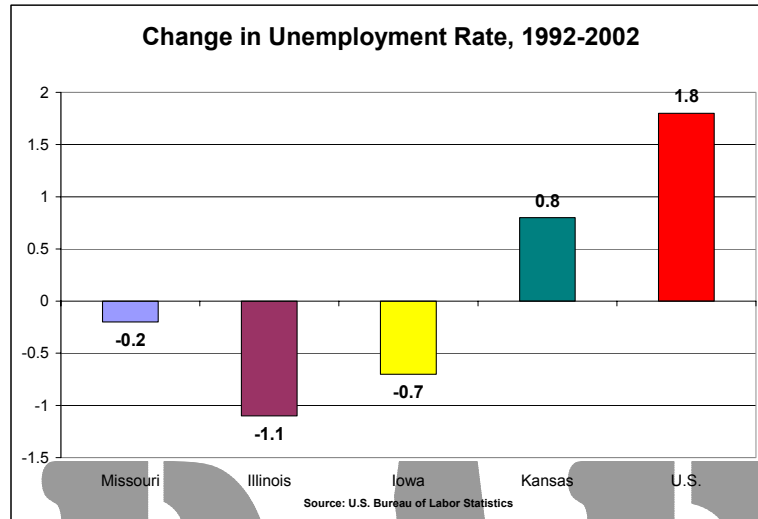
Change in Unemployment Rate, 1992–2002 measures the change in the unemployment rate between 1992 and 2002. Negative numbers reflect a decline in unemployment.

Current Unemployment Rate, July 2003 measures the most recently available unemployment rate at the time the Indicators were aggregated and scored.

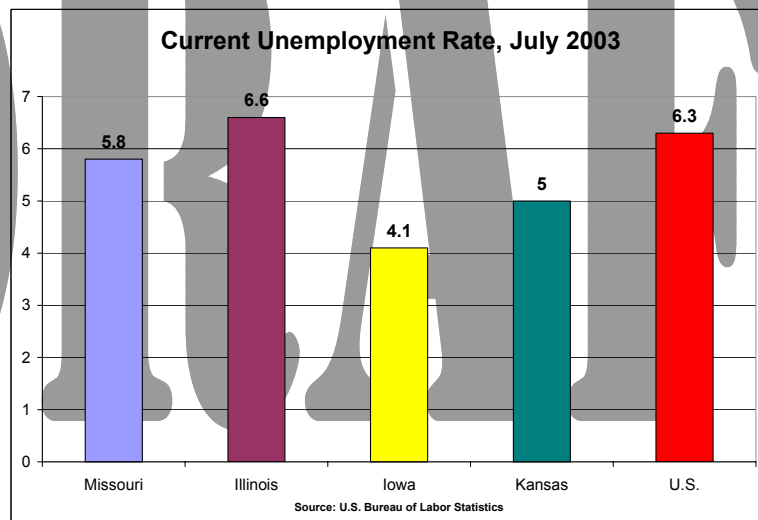
Labor Force Participation measures the percent of population age 16 and above that is working or looking for work. Excluded from this rate are those not working as well as not actively seeking work.



Unemployment and Labor Force –Measures

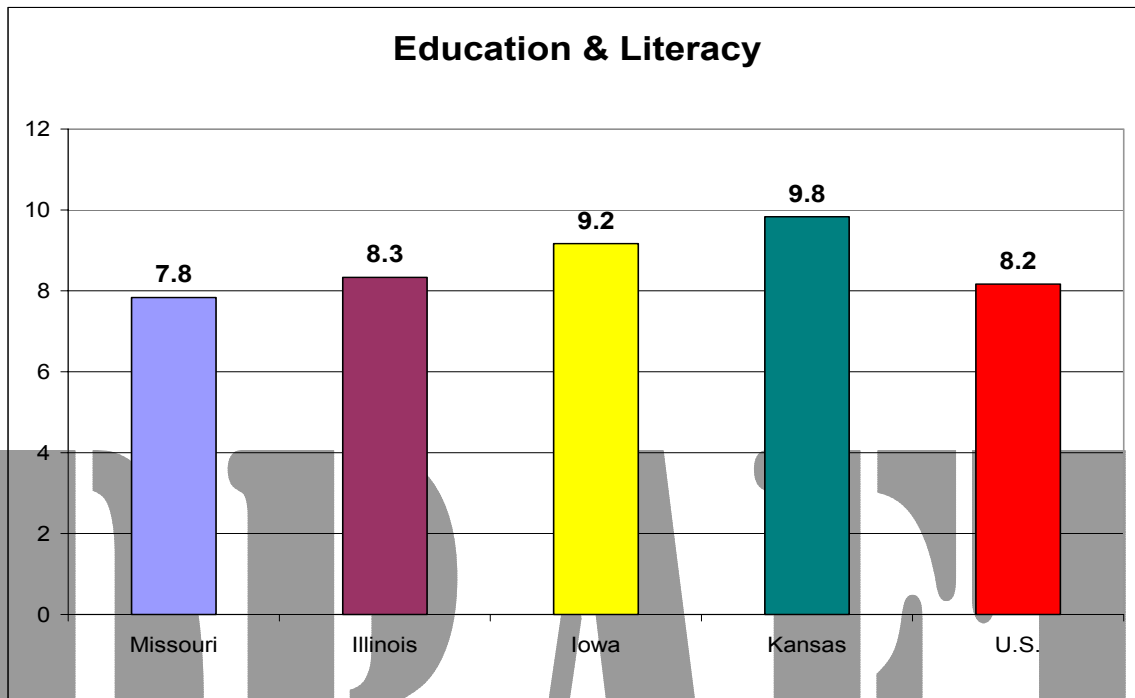


lower is better



lower is better

Indicator: Education and Literacy



About the Measures

Educational Attainment, Bachelor's Degree and Higher represents the percentage of population age 25 and over that holds a Bachelor's Degree or higher as the highest level of their educational attainment.

Educational Attainment, Associate's Degree and Higher represents the percentage of population age 25 and over that holds an Associate's Degree or higher as the highest level of their educational attainment.

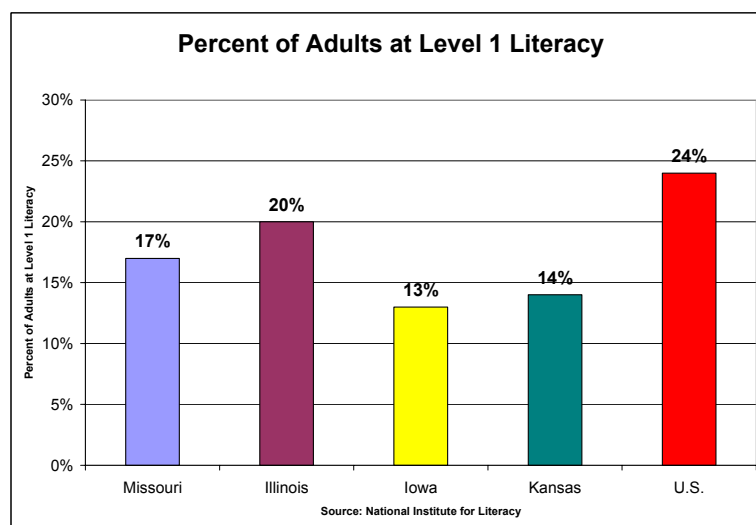
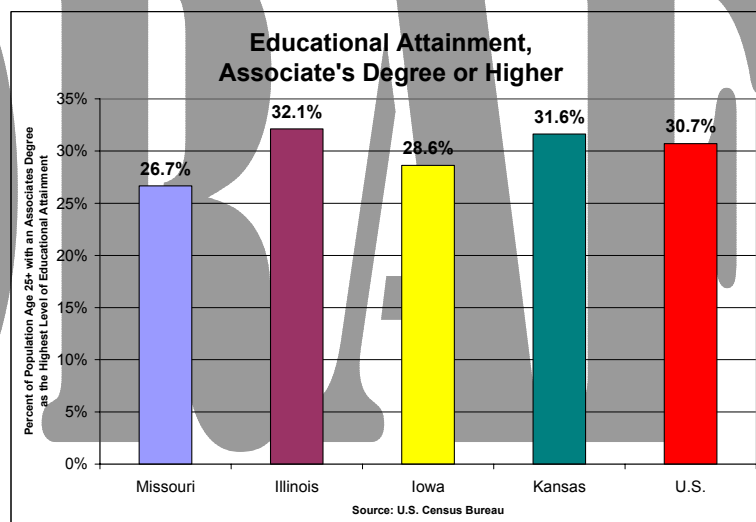
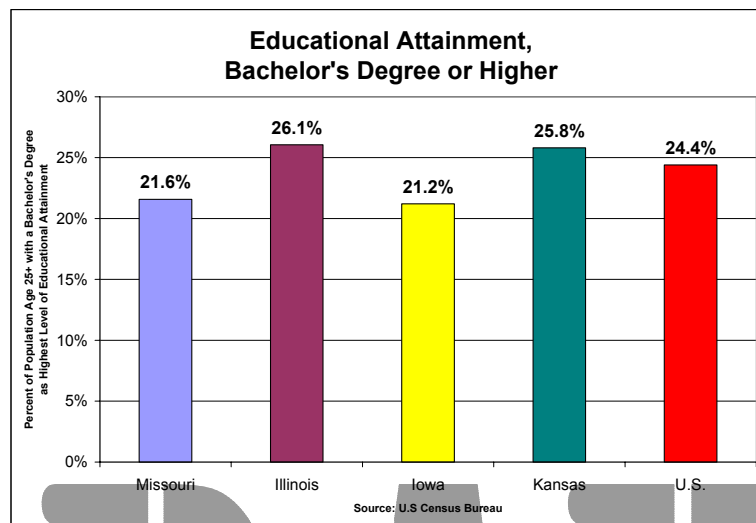
Percent of Adults at Level 1 Literacy measures the percent of adults that are at level 1 adult literacy, the lowest of five levels, as measured by the National Adult Literacy Survey. Adults at level 1 literacy cannot usually determine eligibility from a table of employee benefits; locate an intersection on a street map; locate two pieces of information in a sports article; or calculate total costs of purchase from an order form.

Levels 1 and 2 Literacy indicate the population that lack basic employability skills. Adults at levels 1 and 2 are more likely to live in poverty, be on welfare, have low incomes, commit crimes, and be unemployed, according to the National Adult Literacy Survey.

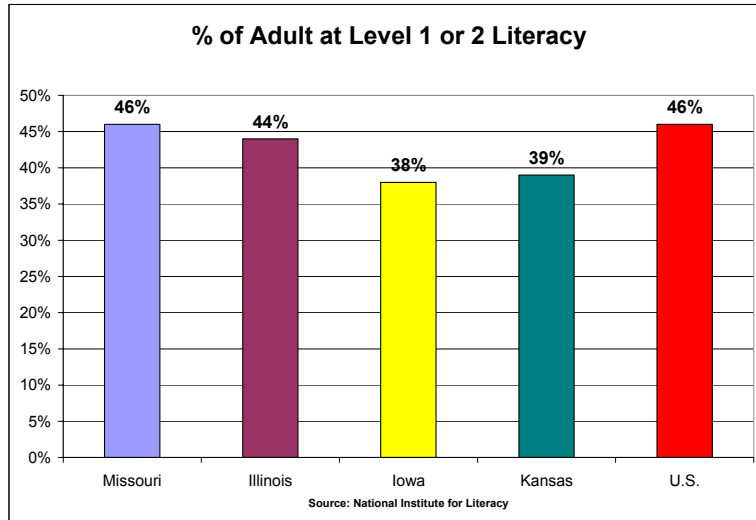
Percent Not Speaking English Well as a Second Language measures the percent of population age 5 and higher that report not speaking English "well" or "very well" as a second language.

At-Risk Youth represents the U.S. Census 2000 unemployment rate covering civilian youth age 16-19 not enrolled in school and unemployed.

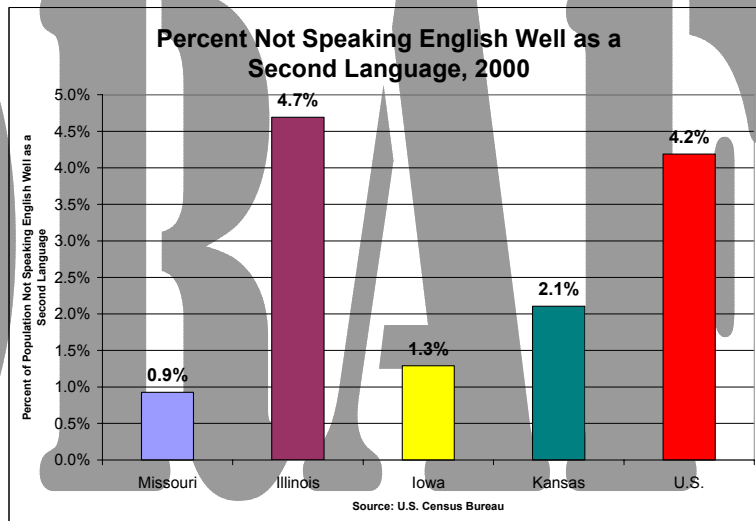
Education and Literacy – Measures



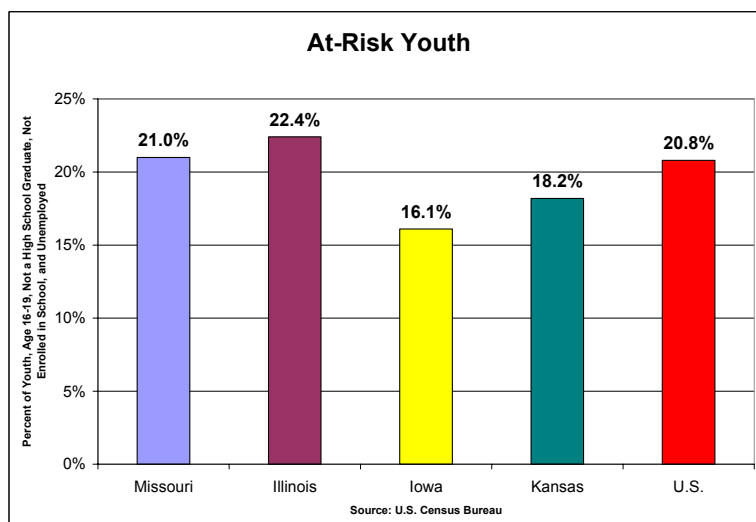
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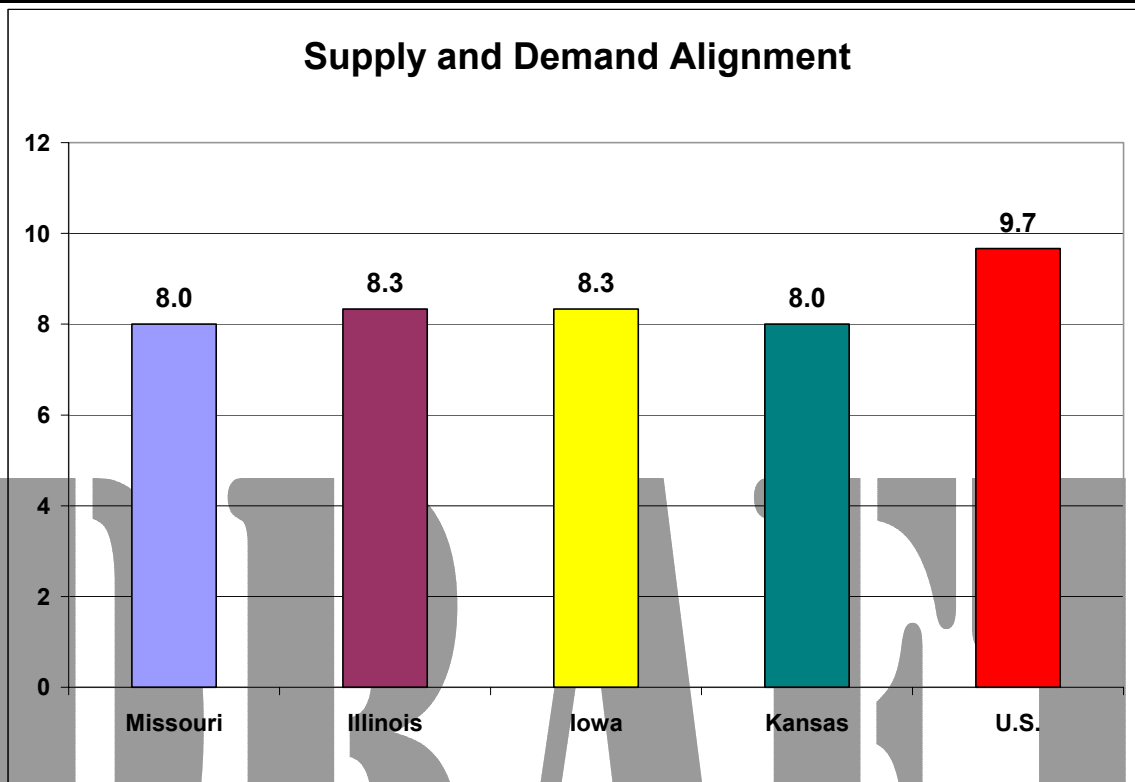


lower is better



lower is better

Indicator: Supply and Demand Alignment



About the Measures

Growth Alignment measures the alignment between job growth 1990-2000 and labor force growth 1990-2000 by state. A score close to 0 is best; positive numbers portray higher job growth than labor force growth (true for all areas studied).

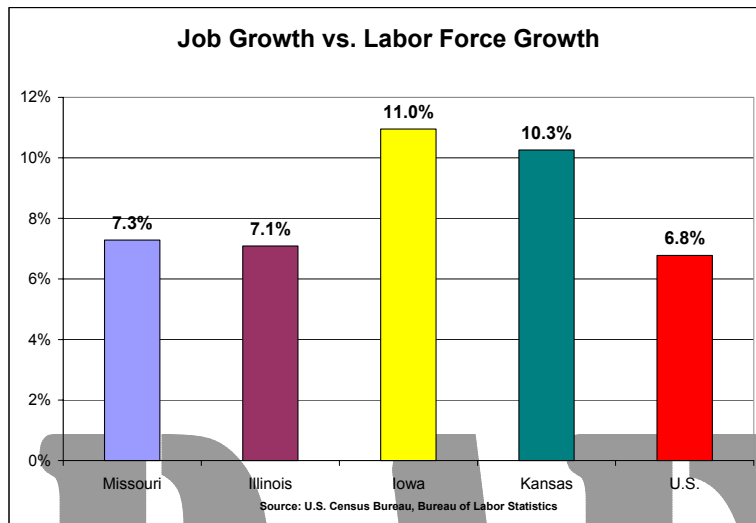
Occupational Alignment measures the average alignment in four broad occupational clusters¹ between jobs reported by employers (AGS Demographics, County Business Patterns), and jobs reported by people (U.S. Census 2000.) A score close to 0 is best.

Educational Alignment measures the average alignment (in three categories of educational attainment²) between the education requirements of a job as reported by employers versus the educational attainment of the adult population as reported by household. A score close to 0 is best, all numbers are positive.

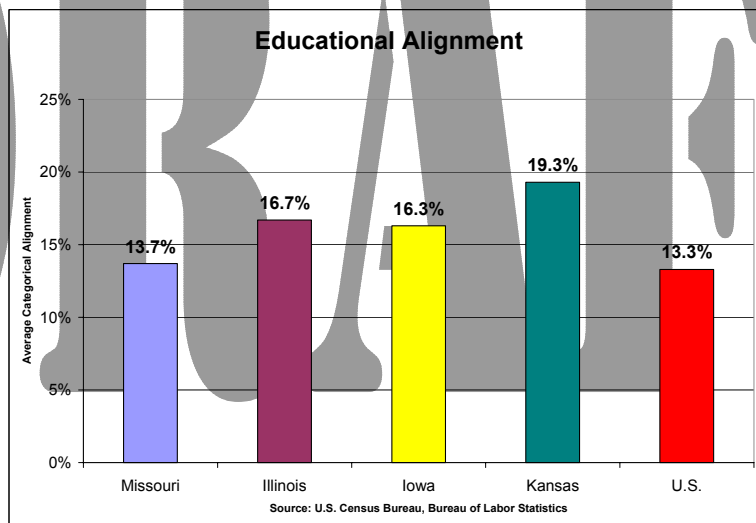
¹ Occupational clusters are managerial-professional-technical; sales and office; services; and production and construction.

² Three categories are bachelor's degree and above, some college but no bachelor's degree, high school degree or less.

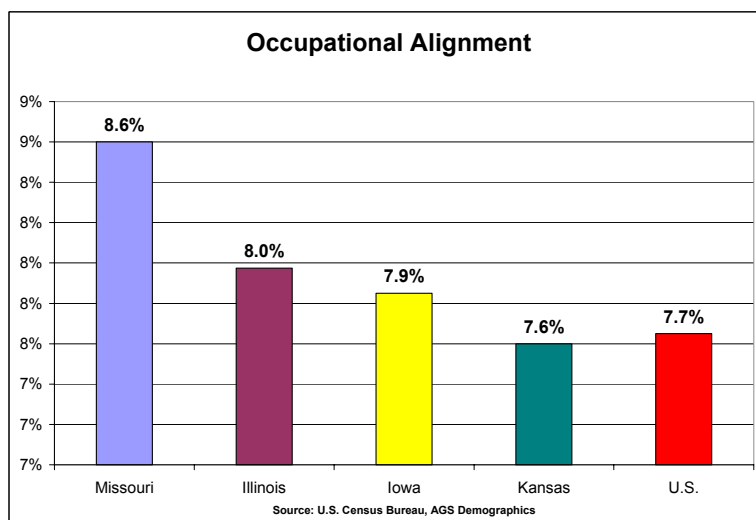
Supply and Demand Alignment – Measures



close to 0 is best

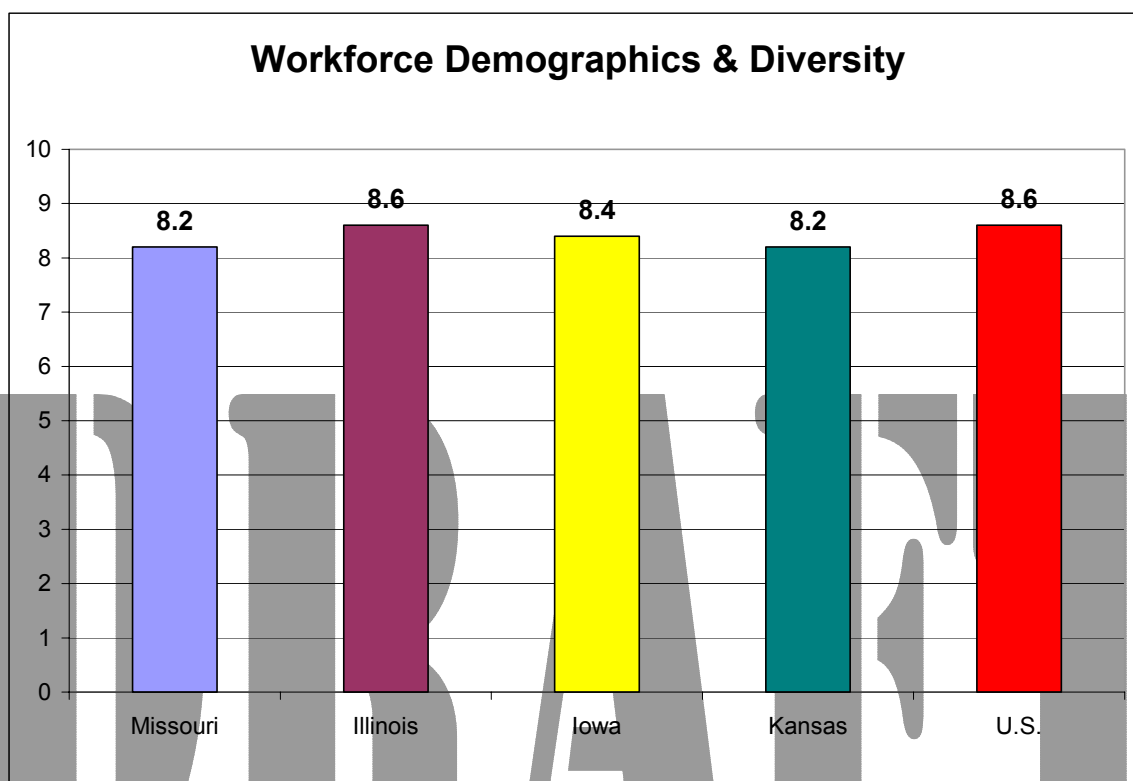


close to 0 is best



close to 0 is best

Indicator: Workforce Demographics and Diversity



About the Measures

Balance Between Entry and Exiting Workforce measures the supply alignment between those beginning to or soon to begin to attach to the labor market (age 15-24) in relationship to those beginning to leave or preparing to leave the workforce (age 55-64). 0 is the best score, positive numbers indicate more entering the workforce than exiting. This is likely a predictor of tightening labor markets, particularly given this time of economic uncertainty and retirement fund scandals that are leading to people work longer before retiring, or perhaps returning to work after retirement.

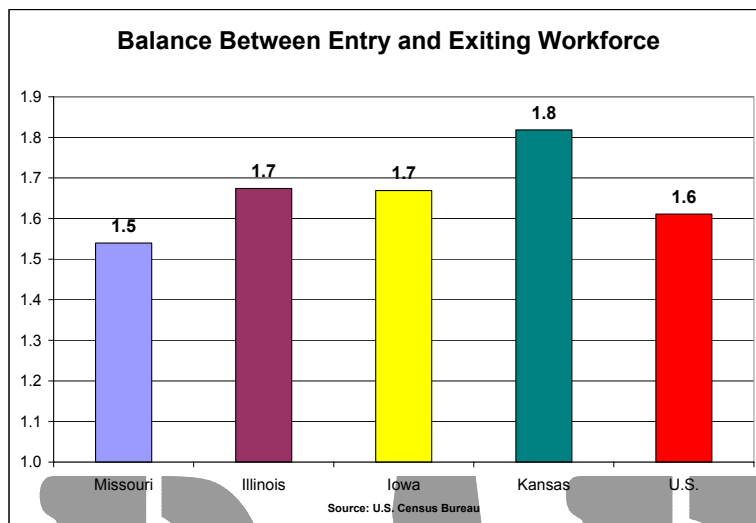
Change in Age By Years, 1990-2000 measures the extent to which an area is aging. The U.S. aged by one full year over a 10-year period. Missouri aged by about 9.6 months (.8 years).

Racial and Ethnic Diversity measures the cumulative average of African-Americans, persons of Hispanic Origin, and persons speaking a primary language other than English.

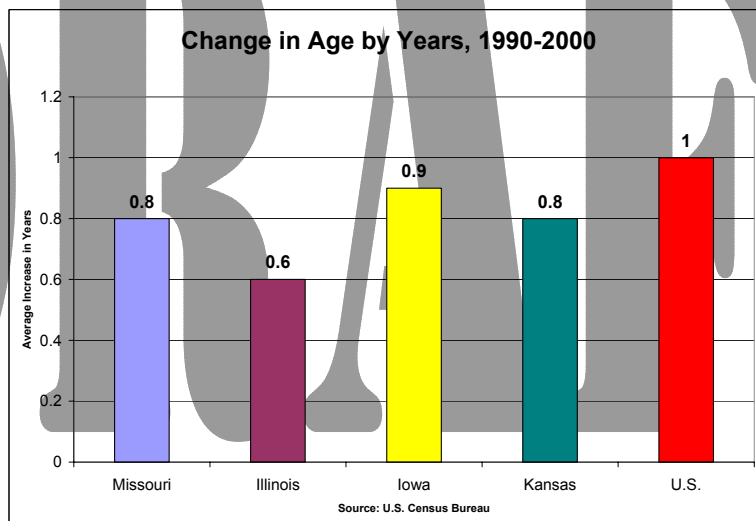
Glass Ceiling measures women's pay (mean average income for women) as a percentage of male pay (mean average income for males) to gauge gender equity. This is extremely important during tight labor markets as talented females consider career location options.

Percent of Disabled that are Employed measures the unemployment rate on the U.S. Census 2000 of those persons that identify themselves as having a disability, age 16-64.

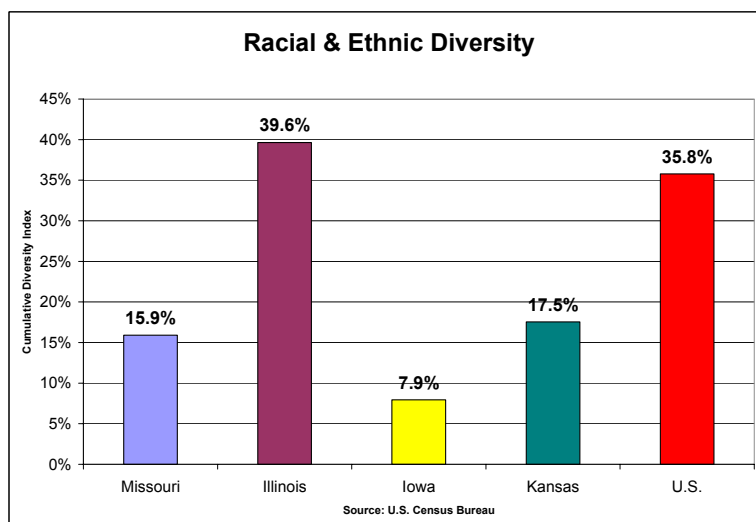
Workforce Demographics and Diversity – Measures

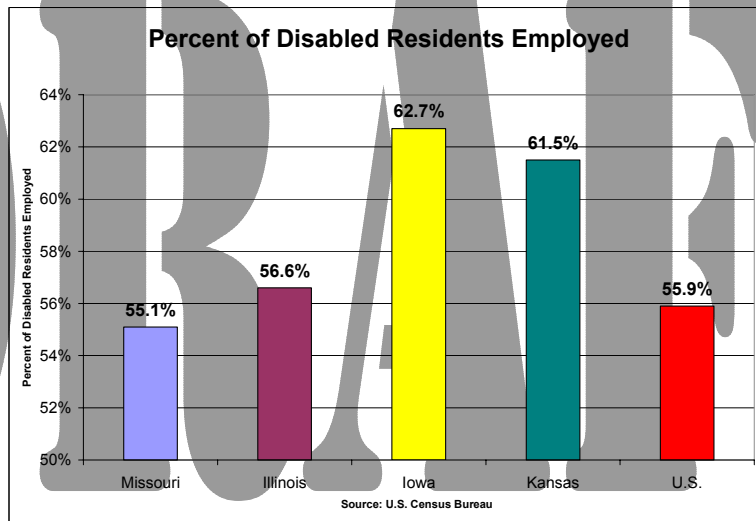
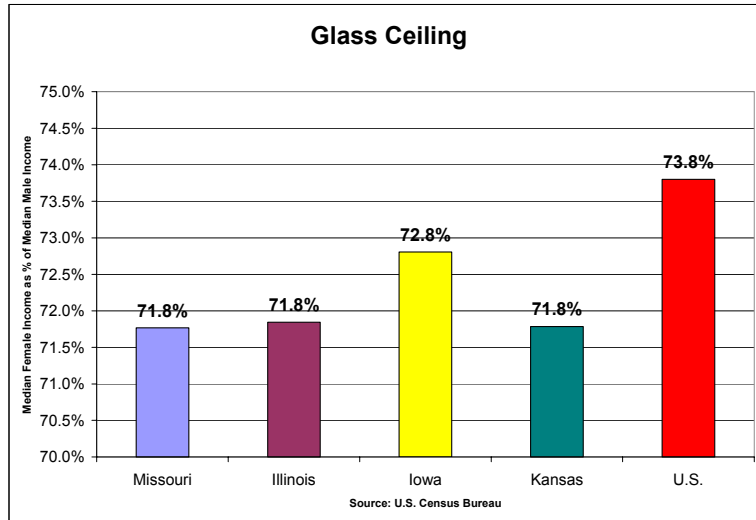


close to 0 is best

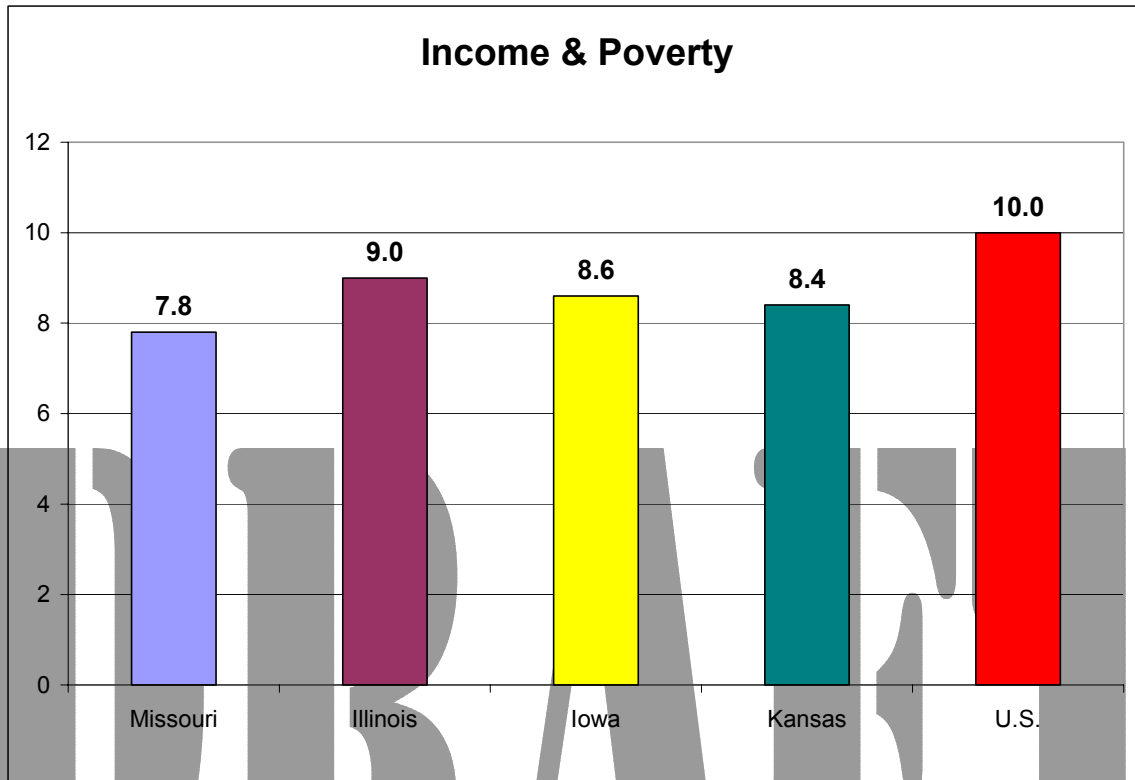


lower is better





Indicator: Income and Poverty



About the Measures

Median Household Income measures the median household income earned by all residents in the household. Income types include: wage or salary; self-employment; interest, dividends, etc.; social security income; supplemental income; public assistance; retirement; and other.

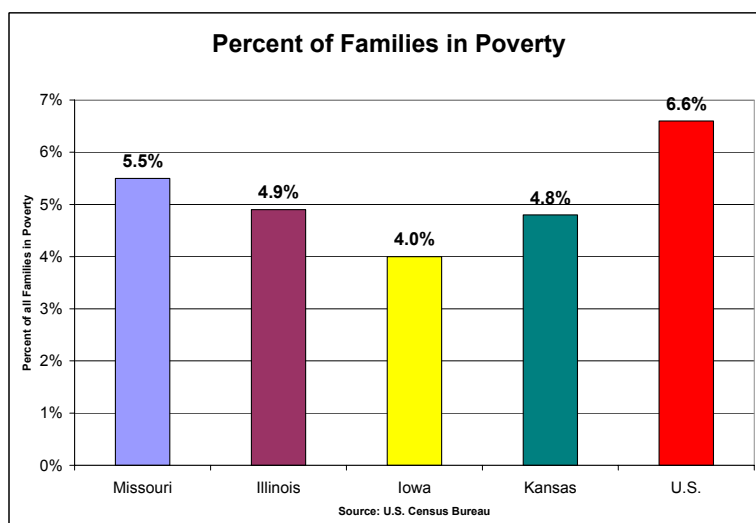
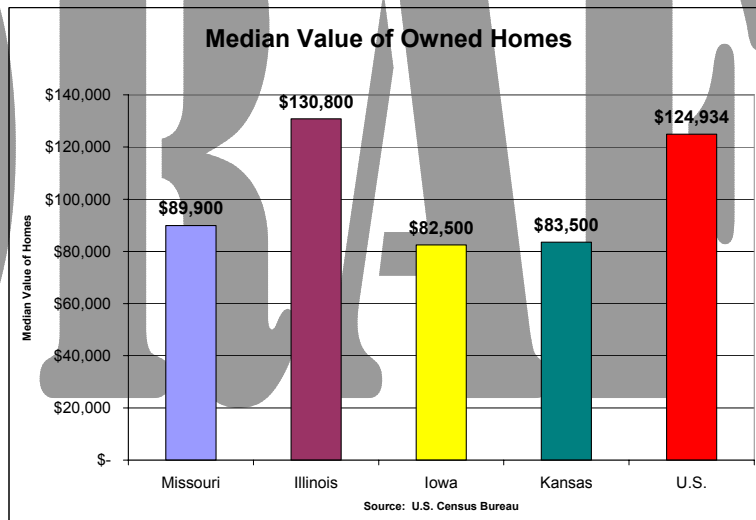
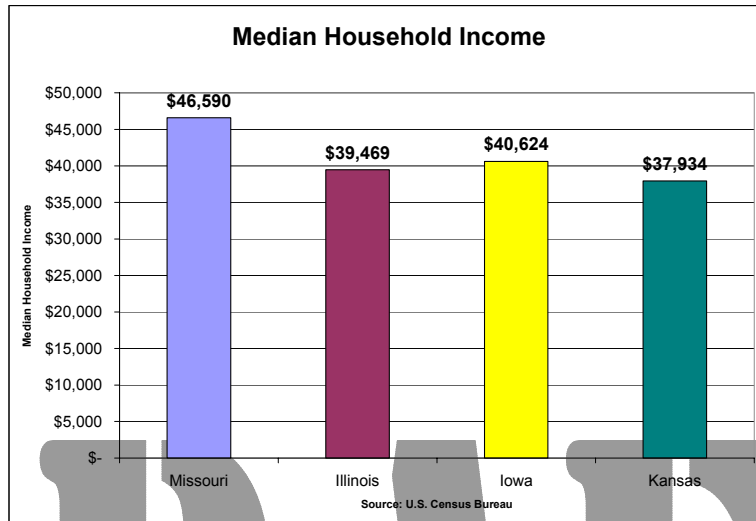
Median Value of Owned Homes measures the median value of all homes that are owned.

Percent of Families in Poverty measures the percent of all families living below the poverty threshold as defined in the U.S. Census.

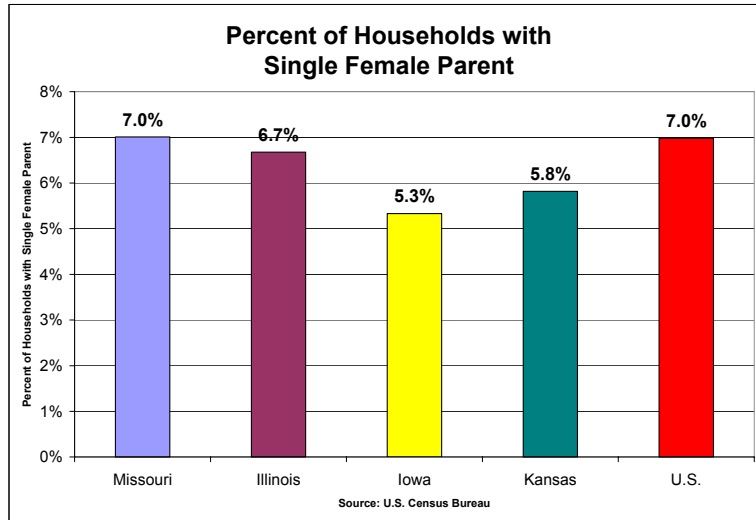
Percentage of Households with Single Female Parent measures the percent of households with a single female as “head of household” with at least one child.

Average Public Assistance Income measures the amount of public assistance income received by an average household per year.

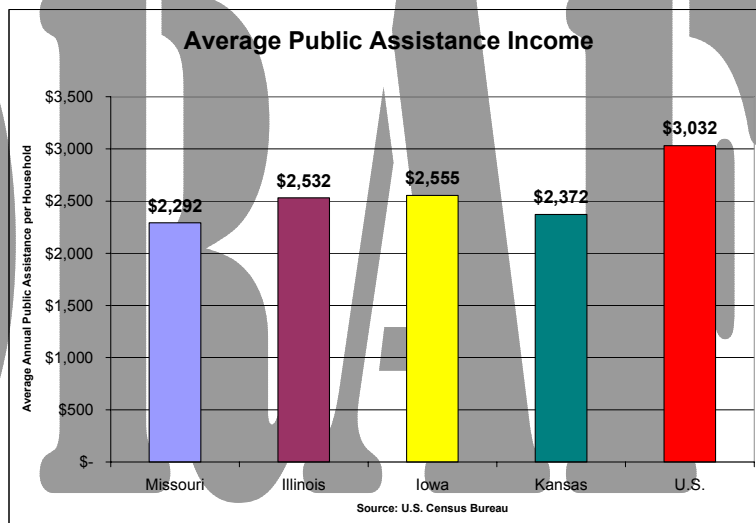
Income and Poverty – Measures



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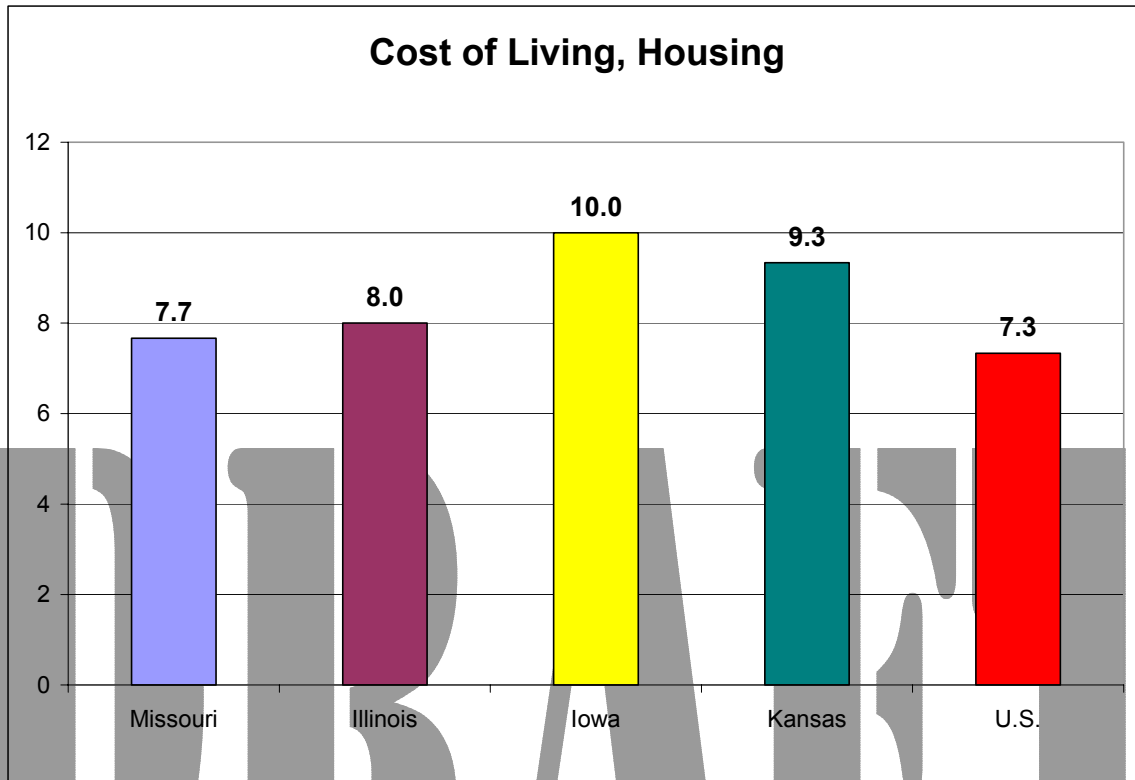


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Indicator: Cost Of Living, Housing



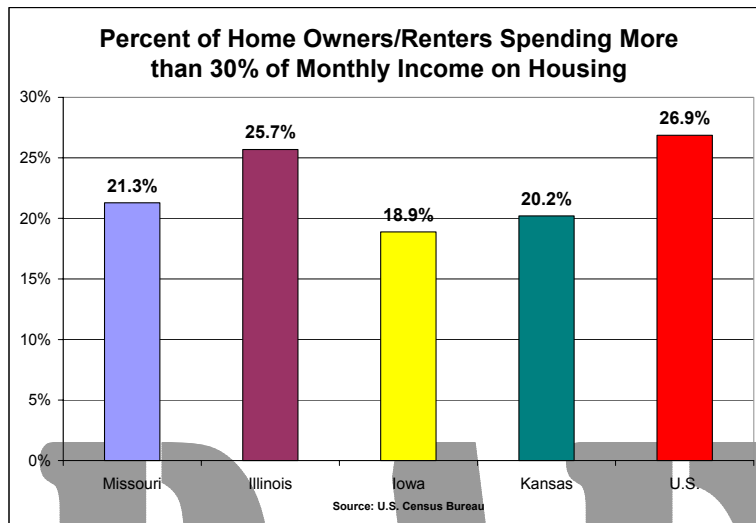
About the Measures

Monthly Housing Costs measures the percent of population spending more than 30% of their monthly income on housing costs, either ownership payments or rent.

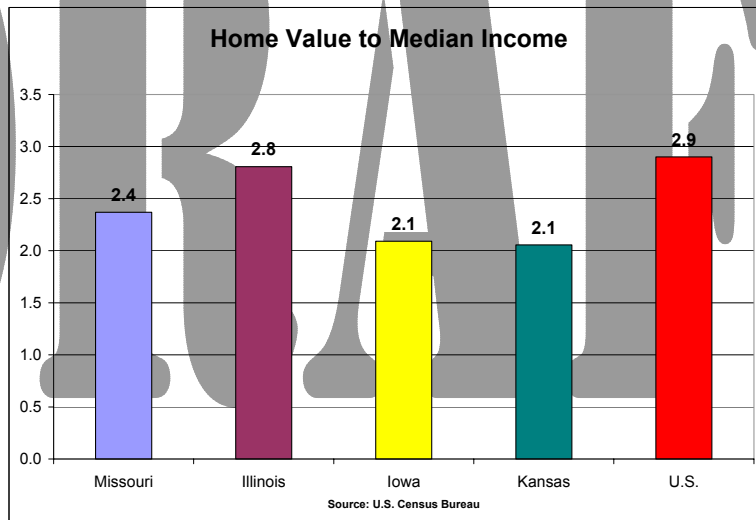
Home Value to Annual Income measures the amount of years it would take the median annual income to pay for the median value home, if the owner chooses to do nothing with the annual income but pay for the home. Economists suggest this figure not exceed 2.5.

Vacant Housing Rate represents the amount of all housing units – owned or rented – that are vacant. Vacancies are an indication of high housing costs and/or the home (or possibly area) is no longer a desirable place to live.

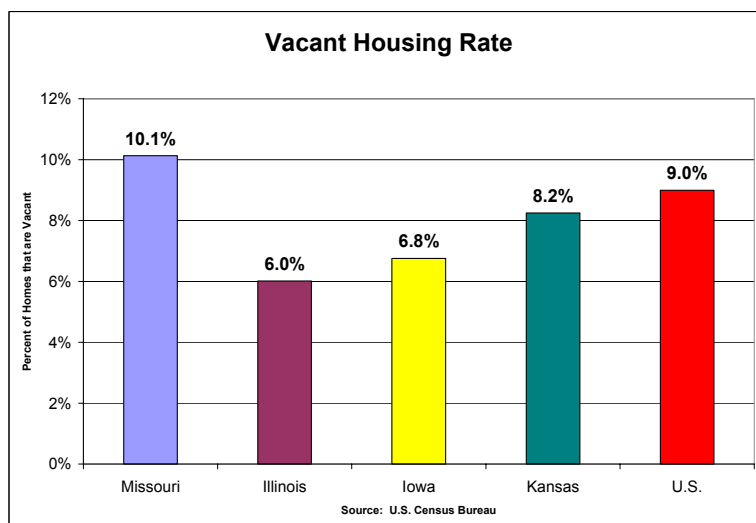
Cost of Living, Housing – Measures



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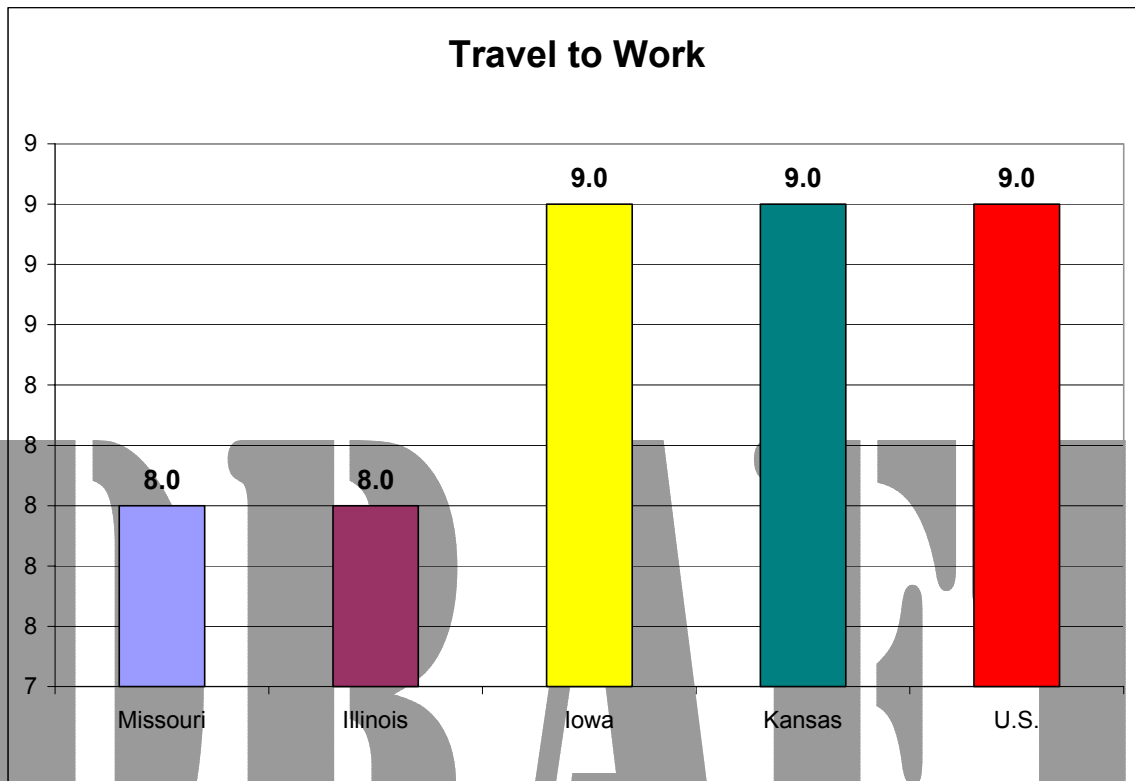


lower is better



lower is better

Indicator: Travel To Work



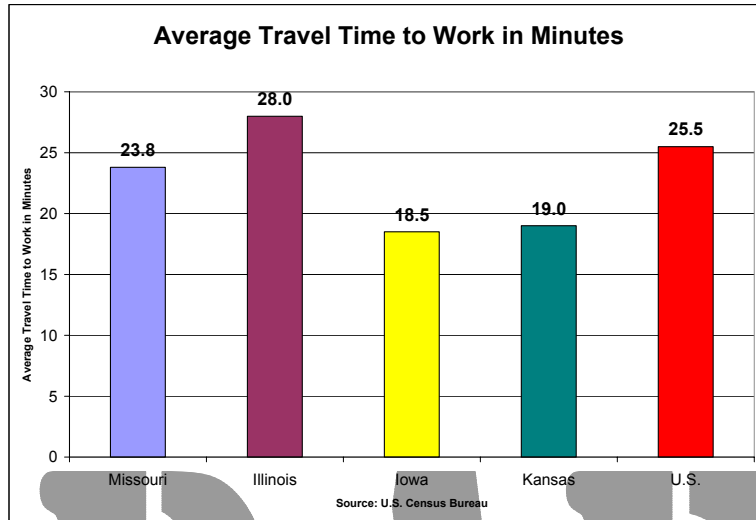
About the Measures

Mean Travel Time to Work in Minutes measures the one-way travel time of commuters in the area.

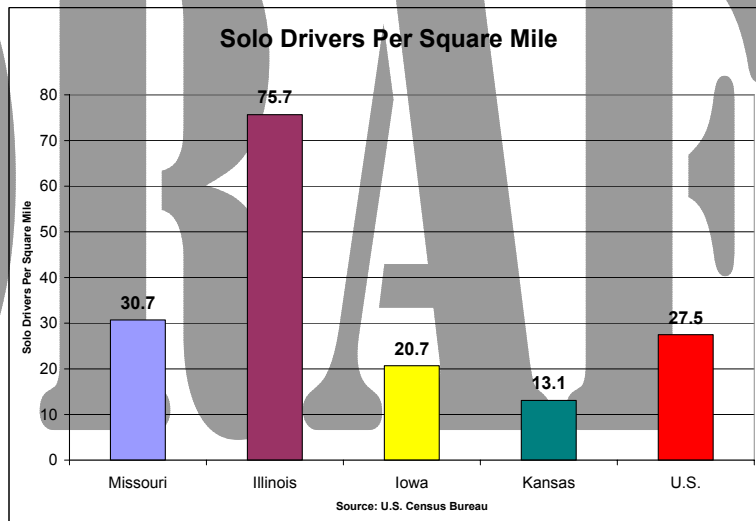
Solo Drivers per Square Mile measures the number of people driving to work alone divided by the square miles of the area. This provides a view of "vehicle density."

Percent Carpooling or Using Public Transportation to Travel to Work measures the percent of all workers who either carpool or use public transportation to commute to work. Combined with solo drivers, it can portray the level of an area's traffic density and how an area provides for less dense traffic patterns (e.g., carpooling, public transportation.)

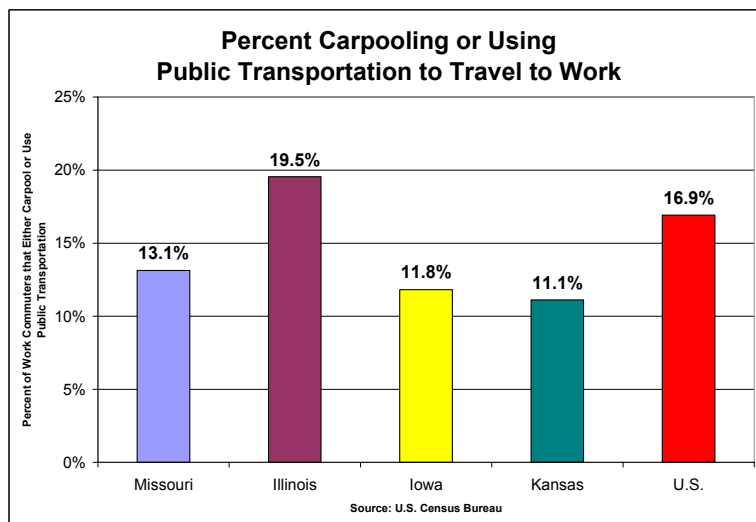
Travel To Work – Measures



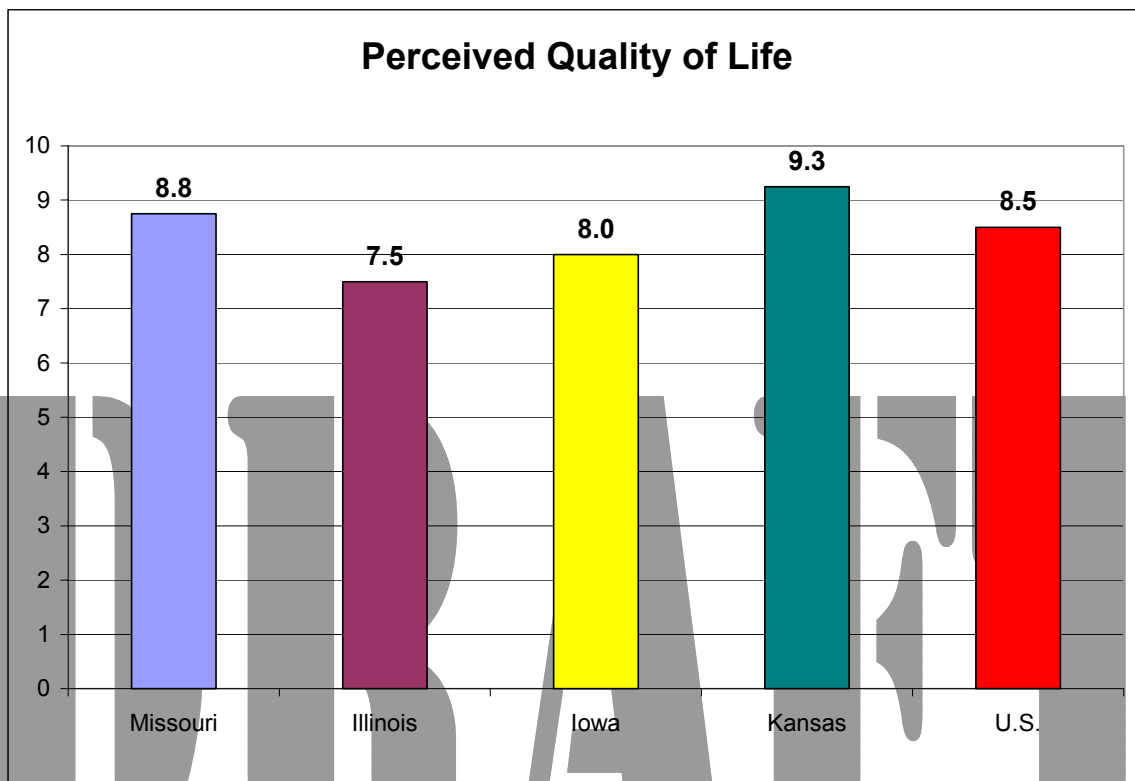
lower is better



lower is better



Indicator: Perceived Quality of Life



About the Measures

Population Growth, 1990–2000 measures the percent change in total population between 1990 and 2000 as an indication of an area's ability to attract and retain people.

Percent of Households with Internet Access measures the percent of households with at least one computer that can access the Internet. This is indicative of the extent to which an area is "wired" or part of the "digital divide."

Percent of Population Living in a Different State in 1995 measures the percent of the population that currently lives in Missouri (2000 U.S. Census), but reported living in a state other than Missouri in 1995. This is indicative of an area's ability to attract people, and may indicate high mobility in the population.

Average Home Appreciation, 1995–2000 measures the percent appreciation in home value from 1995 to 2000. This serves as a measure of an area's "cache" and helps to offset high costs of homes in the Cost of Living indicator.

Places to Be – Measures

